küschall®
designed for life

küschall® K-Junior

Active wheelchair

CE

User manual

CE This product complies with Directive 93/42/EEC concerning medical devices.

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Contents

1 General 5
1.1 Information about the User Manual 5
1.2 Symbols 5
1.3 Guarantee 5
1.4 Service life 6
1.5 Copyright protection 6
2 Safety 7
2.1 Safety information 7
2.2 Correct use 8
2.3 Safety devices 8
3 Technical data 9
3.1 Dimensions and weight 9
3.2 Environmental conditions 10
3.3 Tyre pressure 10
3.4 Identification label 10
4 Components and their function 11
4.1 Overview 11
4.2 Parking brakes 12
4.3 Backrest 13
4.4 Push handles 14
4.5 Buggy-Pushhandle 15
4.6 Sides 16
4.7 Antitipper 17
4.8 Vario-Ax 17
4.9 Rear wheel extension 18
4.10 Seat cushion 18
4.11 Seat position 19
4.12 Accessories 19
5 Set-up 22
6 Using the wheelchair 23
6.1 Safety information 23
6.2 Braking during use 23
6.3 Getting in and out of the wheelchair 24
6.4 Driving and steering the wheelchair 24
6.5 Negotiating steps and kerbs 25
6.6 Going up and down stairs 26
6.7 Negotiating ramps and slopes 27
6.8 Stability and balance when seated 28
7 Transport 30
7.1 Safety information 30
7.2 Folding and unfolding the wheelchair 30
7.3 Removing and fitting the rear wheels 31
8 Maintenance 33
8.1 Maintenance schedule 33
8.2 Cleaning 35
8.3 Disinfection 35
9 Troubleshooting 36
9.1 Identifying and repairing faults 37

10 After use **38**

10.1 Re-use 38

10.2 Disposal 38

1 General

1.1 Information about the User Manual

Thank you for choosing a Küschall® wheelchair.

This User Manual contains important information about using the wheelchair. In order to ensure safety when using your wheelchair, read the User Manual carefully and follow the safety information.

The equipment of your wheelchair may differ from the descriptions and diagrams given here due to the wide range of models available.

1.2 Symbols

Warnings

In this User Manual warnings are indicated by symbols. The warning symbols are accompanied by a heading that indicates the severity of the danger.

WARNING
Indicates a hazardous situation that could result in serious injury or death if it is not avoided.

CAUTION
Indicates a hazardous situation that could result in minor or slight injury if it is not avoided.

IMPORTANT
Indicates a hazardous situation that could result in damage to property if it is not avoided.

Tips and recommendations

Gives useful tips, recommendations and information for efficient, trouble-free use.

1.3 Guarantee

General conditions

Küschall AG guarantees that their wheelchairs are free from defects and are fully functional. The guarantee covers all faults and defects which are verifiably attributable to faulty construction, substandard materials or poor workmanship. Guarantee claims against Küschall AG may only be made by the distributor and not by the wheelchair user.

Limitation of liability

The guarantee does not cover normal wear and tear, the consequences of improper handling or damage, poor maintenance and incorrect assembly or commissioning by the purchaser or a third person or faults which are attributable to circumstances beyond our control. The guarantee is voided if modifications are made to the wheelchair which were not authorised and not performed by the specialist dealer or if inappropriate spare parts are used. The Küschall AG warranty does not cover consequential costs

arising from the rectification of defects such as freight and travel expenses, labour costs, fees etc.

Term of the guarantee

The term of the guarantee is 24 months. The frame is guaranteed for 5 years. Wearing parts are not covered by the guarantee.

1.4 Service life

We estimate that the Küschall® wheelchair has a service life span of five years. It is difficult to state the exact length of the service life of our products, and the length stated is an estimated average life span based on normal use.

The life span may be considerably longer if the wheelchair is used to a limited extent, and if it is used with care, maintained and handled properly. The life span may be shorter if the wheelchair is subjected to extreme use.

1.5 Copyright protection

This User Manual is protected by copyright. It may not be reprinted or copied or transferred to third parties in part or in full without the prior written consent of the manufacturer.

2 Safety

This section contains important safety information for the protection of the wheelchair user and assistant and for safe, trouble-free use of the wheelchair.

2.1 Safety information

WARNING! Risk due to driving style being unsuitable for the conditions
There is a risk of skidding on wet ground, gravel or uneven terrain.
Always adjust your speed and driving style to the conditions (weather, surface, individual ability, etc.).

WARNING! Risk of injury
In a collision you could sustain injury to parts of your body that extend beyond the wheelchair (e.g. feet or hands).
- Avoid an unbraked collision
- Never drive into an object head-on
- Drive carefully through narrow passages.

WARNING! Risk due to wheelchair being out of control
At high speed you could lose control of your wheelchair and overturn.
- Never exceed a speed of 7 km/h.
- Avoid collisions in general.

CAUTION! Risk of burning
The wheelchair components can heat up when exposed to strong sunlight.

CAUTION! Risk of getting fingers caught
There is always a risk of getting, e.g. fingers or arms, caught in the moving parts of the wheelchair.
- Make sure when activating the folding or insertion mechanisms of moving parts, such as the removable axle of the rear wheel, folding backrest or antitipper, that nothing becomes caught.

2.2 Correct use

The wheelchair is propelled manually and should only be used for independent or assisted transport of a disabled person with mobility difficulties. When used without an assistant, it should only be used by persons who are physically able to use the wheelchair safely (e.g. to propel themselves, steer, brake). The wheelchair should only be used on level ground and accessible terrain, as well as indoors.

WARNING!
Any other or incorrect use of the wheelchair could lead to hazardous situations.

2.3 Safety devices

WARNING! Risk of accidents
Safety devices that are incorrectly set or no longer working (brakes, antitipper) can cause accidents.

- Always check that the safety devices are working before you use the wheelchair and have them checked regularly by the specialist dealer.

The functions of the safety devices are described in *Section 4 –* Components and *their function*.

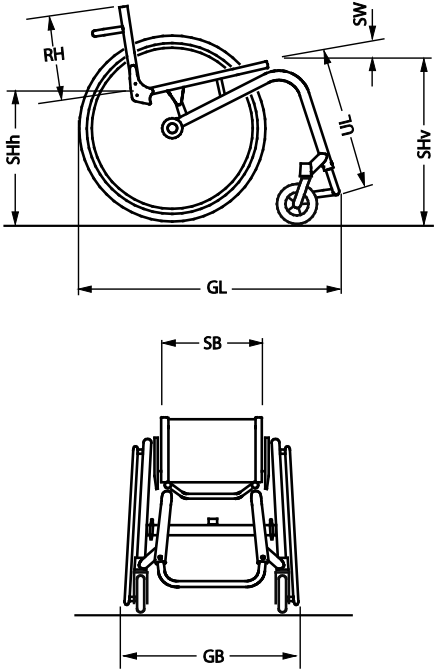
The wheelchair has been tested in accordance with EN 12183. It includes a test for flammability.

3 Technical data

3.1 Dimensions and weight

	Seat width (SB) *240 – 360 mm*		*Seat depth (ST)* *250 – 400 mm*
	Seat height front (SHv) 380 – 450 mm *Seat height rear (SHh) 330 – 470 mm*		*Lower leg length (UL) 150 – 410 mm*
			Backrest height (RH) 270 – 480 mm
	Total length (GL) [1] *730 - 920 mm*		*Backrest angle (RW)* *74°, 78°, 82°, 86°, 90°*
	Total width (GB) *470 – 590 mm*		*Maximum user weight* *60 kg*
	Weight *8.9 kg*		*Transport weight (without rear wheels)* *approx. 5.4 kg*

[1] depending on configuration



3.2 Environmental conditions

Do not expose the wheelchair to temperatures below -20°C or above 40°C.

3.3 Tyre pressure

The ideal pressure depends on the tyre type:

Tyre	Max. pressure		
Low-resistance tyre	*7 bar*	*700 kPa*	*101 psi*
Treaded tyre (marathon)	*7.5 bar*	*750 kPa*	*108 psi*
Slick tyres (speed run)	*10 bar*	*1000 kPa*	*145 psi*
Mountain bike tyre	*4 bar*	*400 kPa*	*58 psi*

3.4 Identification label

The identification label is attached to the frame of your wheelchair and gives the following information:

① Manufacturer's address
② Product description
③ Date of manufacture
④ Instruction to read the User Manual
⑤ Maximum user weight
⑥ Instruction that this wheelchair is not designed for passenger transport in vehicles
⑦ Serial number
⑧ Warning that this is an active wheelchair and can tip backwards

4 Components and their function

4.1 Overview

① Frame
② Seat
③ Axle
④ Rear wheel with handrim
⑤ Backrest
⑥ Footrest
⑦ Front wheel fork with front wheel

Short description

The Küschall *K-Junior* is a rigid frame wheelchair with folding backrest.

The equipment of your wheelchair may differ from the diagram as each wheelchair is manufactured individually to the specifications in the order.

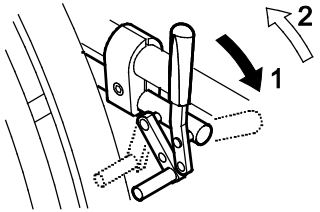
4.2 Parking brakes

The parking brakes are used to immobilise the wheelchair when it is stationary to prevent it from rolling away.

WARNING! Risk of overturning if you brake sharply
If you apply the parking brakes while you are moving, the direction of movement can become uncontrollable and the wheelchair may stop suddenly, which can lead to a collision or to you falling out.
- - Never apply the parking brakes while you are moving.

WARNING! Risk of overturning
The parking brakes will not operate correctly unless there is sufficient air in the tyres.
(→ Section 3 – *Tyre pressure*)

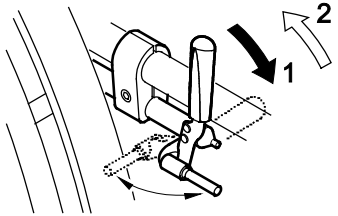
Standard brake



1 To apply the brake, push the brake lever forwards as far as possible.

2 To release the brake, pull the brake lever backwards.

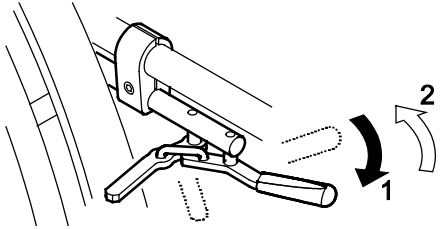
Performance brake



1 To apply the brake, push the brake lever forwards as far as possible.

2 To release the brake, pull the brake lever backwards.

Active brake



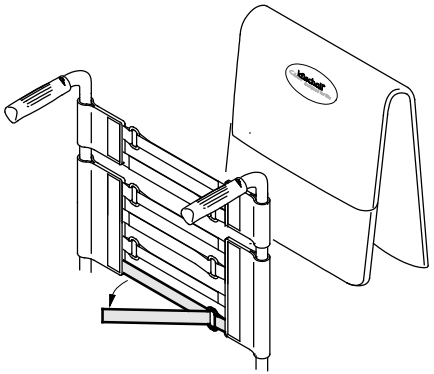
1. To apply the brake, pull the brake lever forwards beside or between your knees as far as possible.
2. To release the brake, push the brake lever backwards beside or between your knees.

4.3 Backrest

Backrest cover

You can adjust the tension of the backrest cover as required.

Adjusting the backrest cover



- Remove the backrest cushion.
- Loosen the Velcro® tapes on the rear of the backrest cover by simply pulling on them.
- Tighten or loosen the tapes as required then reattach them.

IMPORTANT
If the bands are set very loose, the tipping point of your wheelchair is changed for the worse.

Backrest height

The height of the backrest can be adjusted. The adjustment must be carried out by the specialist dealer.

Backrest angle

The angle of the backrest can be adjusted. The adjustment must be carried out by the specialist dealer.

Backrest bar

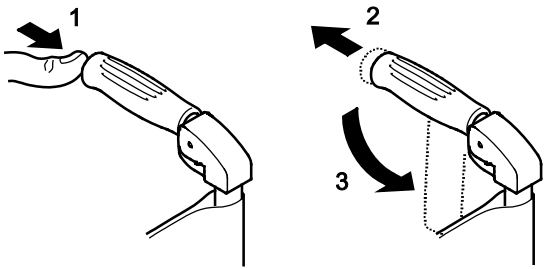
WARNING! Risk of accidents
The backrest bar is not suited for lifting or carrying the wheelchair with the user sitting in it as it can break.
- The backrest bar should not be used to lift or carry the wheelchair while the user is sitting in it.

4.4 Push handles

IMPORTANT
Always check the push handles before using the wheelchair, as to whether the hand grips are secure, cannot be turned and cannot be pulled off.

Foldable push handles (optional)

Foldable push handles are used when the push handles are only required occasionally.

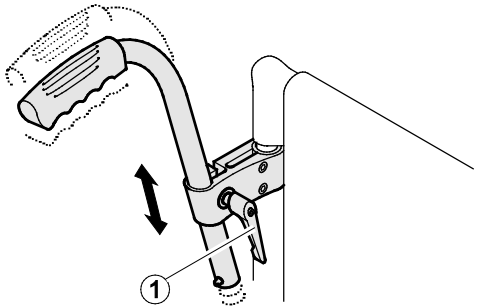


- To fold down the push handles, hold the wheelchair with one hand. Grip the push handle with the other and using your thumb activate the release that is concealed under the plastic. (1)
- At the same time pull the push handle backwards (2) and fold it down (3).
- To fold the push handles up, bring the push handle into the horizontal position until it engages.

IMPORTANT
Make sure that the push handle does actually engage so that it does not accidentally fold down while pushing the wheelchair.

Height adjustable, angled push handles (optional)

The infinitely height adjustable push handles allow any assistant to adjust the handles to a comfortable level.



- To set the height of the push handles, loosen the bolt ①, push the handle to the desired position and tighten the bolt again.

4.5 Buggy-Pushhandle

To push the wheelchair comfortably, it can be equiped with a removable pushhandle.

WARNING
A wheelchair equiped with a buggy pushhandle may only be loaded with a weight of up to 60kg.

Buggy-Pushhandle fixation

The buggy-pushhandle is attached to the wheelchair by an adapter, which is mounted to the axle tube.

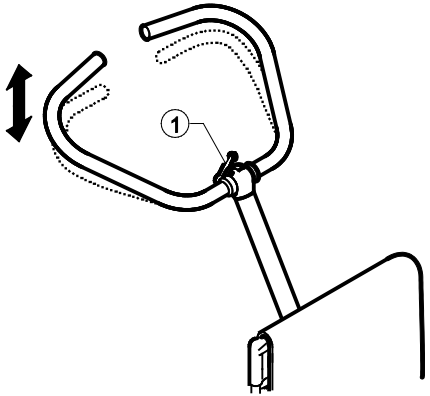
! The adapter must be mounted by your specialist dealer

- Open the quickrelease and slide the buggy-pushhandle into the mounting fixture.
- Close the quickrelease.
- Insert the floating-axle to secure the catch.

Buggy-Pushhandle removal

- Press the floating-axle catch and remove the floatingaxle.
- Open the quickrelease catch and slide the buggy-pushhandle from the mounting fixture.
- Replace the floating-axle, so that it doesn't get lost.

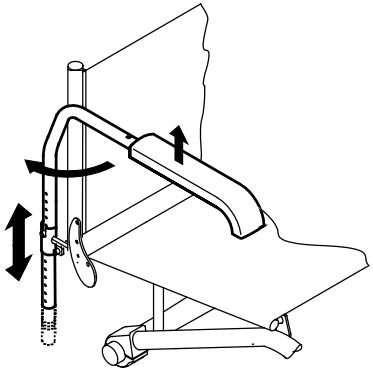
Pushhandle height adjustment



- Loosen the release handle ① and swing the handle into the required position.
- Refasten the release handle ① again (pressing the button allows the handle to be turned, so that it is out of the way).

4.6 Sides

Simple armrest, height-adjustable, swivelling



Removing

- Raise the armrest and pull it upwards out of the holder.

Fitting

- Push the armrest into the holder.

Adjusting the height

- Pull the armrest out of the holder.
- Loosen the screw on the tube of the armrest and screw it back in at the desired height.
- Push the armrest back into the holder.
- Perform the setting on both sides.

Swivelling

- Raise the armrest a little and swivel it outwards.

Mudguard

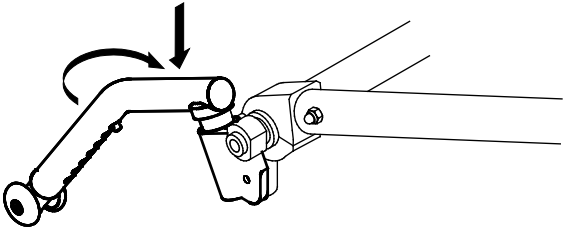
In order to prevent dirt from the wheels spraying upwards, a removable mudguard can be fitted. The position of the mudguard can be adjusted. The adjustment must be carried out by the specialist dealer.

Clothes-guard

A clothes-guard can be fitted to protect your clothes. Before folding the back of the wheelchair, the clothes-guard must first be folded inwards against the backrest.

4.7 Antitipper

An antitipper prevents the wheelchair from tipping backwards.



Activating the antitipper

- Push the antitipper downwards against the spring and swivel it backwards through 90° until it engages.

CAUTION! Risk of tipping
An activated antitipper can catch when negotiating a step or an edge.
Always deactivate the antitipper before driving over a step or kerb.

Deactivating the antitipper

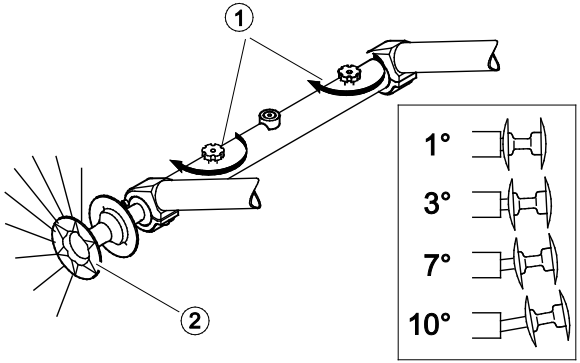
- Push the antitipper downwards against the spring and swivel it inwards through 90° until it engages.

Setting the height

- Press the spring pin on the antitipper and push the inner section to the position required. Allow the spring pin to engage in the nearest hole.

4.8 Vario-Ax

Your wheelchair can be fitted with a Vario-Ax. The Vario-Ax makes it possible to change the wheel camber.



Adjusting the Vario-Ax

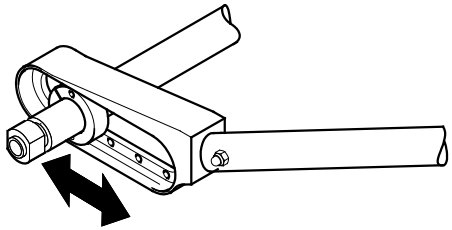
- Loosen the knurled screw ① on the Vario-Ax.
- Pull the wheel by the hub ② until the desired angle is set.
- A gentle engagement will indicate when it has reached one of the four possible positions.
- Retighten the knurled screw ①.
- Perform the same setting on both sides.

IMPORTANT!
Do not overtighten the knurled screw as this can damage its mechanism.

IMPORTANT!
Changing the wheel camber can impair or negate the function of the parking brakes.

4.9 Rear wheel extension

Your wheelchair can be fitted with a rear wheel extension. The rear wheel extension makes it possible to alter the position of the rear wheel and thus the tipping stability of the wheelchair. The adjustment must be carried out by the specialist dealer.

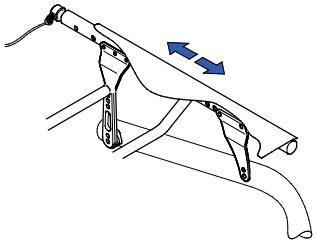


4.10 Seat cushion

A suitable cushion is needed to provide an even pressure distribution on the seat.

4.11 Seat position

The seat position and thus the tipping stability of your wheelchair can be altered. The adjustment must be carried out by the specialist dealer.



Seat height front (SHv)

The SHv can be adjusted. The adjustment must be carried out by the specialist dealer.

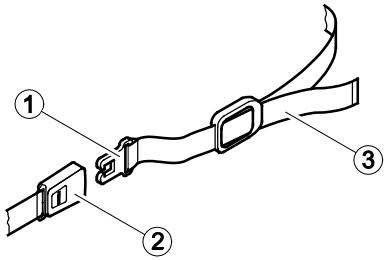
Seat height rear (SHh)

The SHh can be adjusted by several centimeters. The adjustment must be carried out by the specialist dealer.

4.12 Accessories

Postural belt

Your wheelchair can be fitted with a postural belt. The postural belt prevents you from sliding forward in your wheelchair.



Fitting a safety belt

IMPORTANT
Safety belts must be fitted by a specialist dealer.

Opening the safety belt

- Push in the PRESS button and pull the catch ① out of the buckle ②. The safety belt opens.

Closing the safety belt

- Push the catch ① into the buckle ②.
- Tighten the belt ③ until you are held securely in the wheelchair.

Air pump

The air pump is fitted with a universal valve connection.

- Remove the dust cap from the valve connection.
- Push the valve connection onto the open valve on the wheel and pump the wheel up.

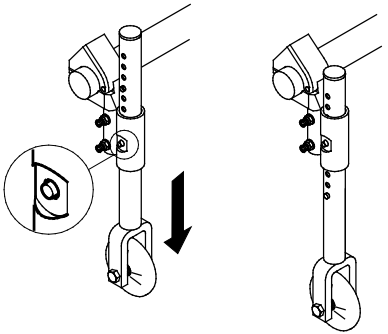
Passive illumination

You can attach reflectors to the rear wheels.

Transit wheels

WARNING!
When using transit wheels, the parking brakes no longer have any effect and you cannot control your wheelchair via the handrims.

If your wheelchair is too wide for certain applications, e.g. trains/aeroplanes, narrow passageways, narrow doors, the transit wheels can be used.



Switching to transit wheels

- Lower the transit wheels into the operating position. To do this, press the pin inwards until you can pull the tube down.
- Press the second pin in.
- Pull the tube further downwards until the pin engages into the slot.
- Move the wheelchair to a stable object (door frame, heavy table), which you can use for support and hold onto it firmly with one hand.
- Tilt the wheelchair until the rear wheel on the opposite side rises off the floor.
- Remove the rear wheel (→Section 7 – *Removing the rear wheels*).
- Repeat the process on the other side.

Prior to removing the rear wheels, the distance between the lowered transit wheels and the floor should not be more than 2 cm.

Switching from transit wheels to rear wheels

- Move the wheelchair to a stable object, which you can use for support and hold onto it firmly with one hand.
- Tilt the wheelchair until the transit wheel on the opposite side rises slightly off the floor.
- Fit the rear wheel back onto the removable axle (→Section 7 – *Fitting the rear wheels*).
- Bring the transit wheels back into the inactive position.
- Repeat the process on the other side.

5 Set-up

CAUTION!
Before using the wheelchair, check its general condition and its main functions. (See Section 8 – Maintenance)
Your specialist dealer will supply your wheelchair ready for use. Your dealer will explain the main functions and ensure that the wheelchair meets your needs and requirements .

6 Using the wheelchair

6.1 Safety information

CAUTION! Risk of crushing
There may be a very small gap between the rear wheel and the mudguard with the risk that you could trap your fingers.
- Ensure that you always propel your wheelchair using the handrims only.

CAUTION! Risk of crushing
There may be a very small gap between the rear wheel and the parking brake with the risk that you could trap your fingers.
- Ensure that you always propel your wheelchair using the handrims only.

WARNING! Risk of accidents
Uneven tyre pressure can have a huge effect on handling.
- Check the tyre pressure before each journey.

6.2 Braking during use

Whilst you are moving, you brake by transferring force to the handrim with your hands.

- Hold the handrims and press evenly with both hands until the wheelchair stops.

WARNING! Risk of overturning if you brake sharply
If you apply the parking brakes while you are moving, the direction of movement can become uncontrollable and the wheelchair may stop suddenly, which can lead to a collision or to you falling out.
- - Never apply the parking brakes while you are moving.

CAUTION!
If you brake for a long time, a lot of frictional heat is produced at the handrims (especially MaxGrepp and Supergripp). You could burn your hands.
- Wear suitable gloves.

6.3 Getting in and out of the wheelchair

WARNING! Risk of overturning
There is a high risk of overturning during the transfer.
- Only get in and out without assistance if you are physically able to do so.

WARNING! Risk of overturning
The wheelchair could tip forwards if you stand on the footrest.
- Never stand on the footrest when getting in and out.

CAUTION!
If you release or damage the brakes the wheelchair could roll away out of control.
- Do not support yourself on the brakes when getting in and out.

IMPORTANT!
The mudguards and armrests could become damaged.
- Never sit on the mudguards or armrests when getting in and out.

- Apply the parking brakes.
- Place your feet on the ground.
- Hold the wheelchair and, if necessary, also hold a fixed object in the vicinity.

6.4 Driving and steering the wheelchair

You drive and steer the wheelchair using the handrims.

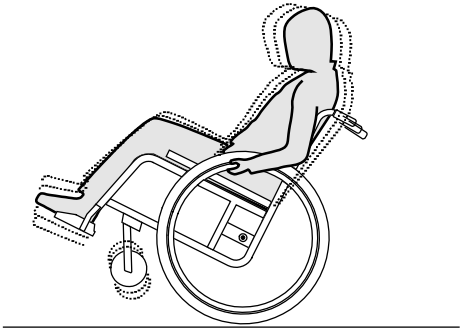
Before driving without an assistant you must find your wheelchair's tipping point.

WARNING! Risk of tipping
The wheelchair can tip backwards if it is not fitted with an antitipper . When finding the tipping point, an assistant must stand immediately behind the wheelchair to catch it if it tips over.
To prevent tipping, install an antitipper device.

WARNING! Risk of tipping
The wheelchair can tip forwards.
- When setting up your wheelchair, test its behaviour in terms of tipping forward and adjust your driving style accordingly.

CAUTION!
A heavy load hanging on the backrest can affect the wheelchair's centre of gravity.
- Change your driving style accordingly.

Finding the tipping point



- Release the brake.
- Roll forwards a short distance, grasp both handrims firmly and pull backwards with a slight kick.
- The shift in weight and steering in opposite directions with the handrims will enable you to identify the tipping point.

6.5 Negotiating steps and kerbs

WARNING! Risk of overturning
When negotiating steps you could lose your balance and tip the wheelchair over.
- Always approach steps and kerbs slowly and carefully.
- Do not go up or down steps that are higher than 25 cm.

CAUTION
An activated antitipper prevents the wheelchair from tipping backwards.
- Deactivate the antitipper before going up or down steps or kerbs.

With an assistant

Going down a step

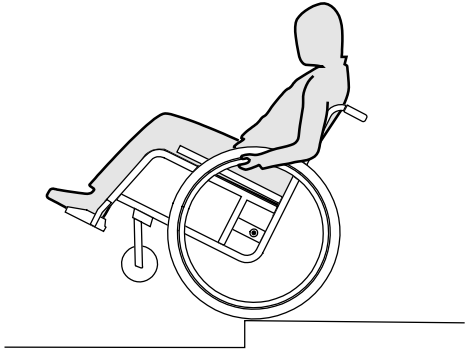
- Move the wheelchair right up to the kerb and hold the handrims.
- The assistant should hold both push handles, place one foot on the tipper aid (if installed) and tilt the wheelchair backwards so that the front wheels lift off the ground.
- The assistant should then hold the wheelchair in this position, push it carefully down the step and then tilt it forwards until the front wheels are back on the ground.

Going up a step

- Move the wheelchair backwards until the rear wheels touch the kerb.
- The assistant should tilt the wheelchair using both push handles so that the front wheels lift off the ground, then pull the rear wheels over the kerb until the front wheels can be placed back on the ground.

Without an assistant

WARNING! Risk of tipping
When going down a step without an assistant you could tip over backwards if you cannot control your wheelchair.
- First learn how to go down a step with an assistant.
- Learn how to balance on the rear wheels (→Section 6 – *Driving and steering the wheelchair).*

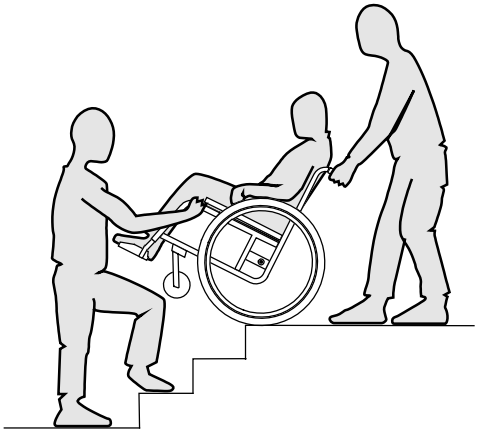


Going down a step

- Move the wheelchair right to the kerb, lift the front wheels and keep the wheelchair balanced.
- Now slowly roll both rear wheels over the kerb. While doing this, hold the handrims firmly with both hands until the front wheels are back on the ground.

6.6 Going up and down stairs

WARNING! Risk of overturning
When negotiating stairs you could lose your balance and overturn your wheelchair.
- Always use 2 assistants when negotiating stairs with more than one step.



- You can go up and down stairs by taking them one step at a time, as described above. The first assistant should stand behind the wheelchair holding the push handles. The second assistant should hold a solid part of the front frame to steady the wheelchair from the front.

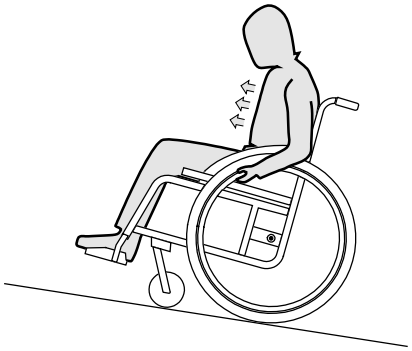
6.7 Negotiating ramps and slopes

WARNING! Risk due to wheelchair being out of control
When negotiating slopes or gradients your wheelchair could tip backwards, forwards or sideways.
- Always have an assistant behind the wheelchair when approaching long slopes.
- Avoid lateral slopes.
- Avoid slopes of more than 7°.
- Avoid jerking when changing direction on a slope.

CAUTION!
Your wheelchair could run away even on slightly sloping ground if you do not control it using the handrims.
- Use the parking brakes if your wheelchair is stationary on sloping ground.

Going up slopes

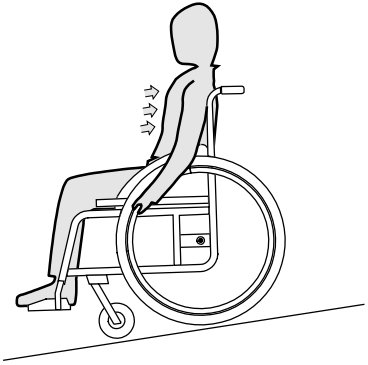
To go up a slope, you must create some momentum, keep up the momentum and control the direction at the same time.



- Bend your upper body forwards and propel the wheelchair with quick, powerful strokes on both handrims.

Going down slopes

When going down slopes, it is important to control your direction and particularly your speed.



- Lean back and carefully allow the handrims to run through your hands. You should be able to stop the wheelchair at any time by gripping the handrims.

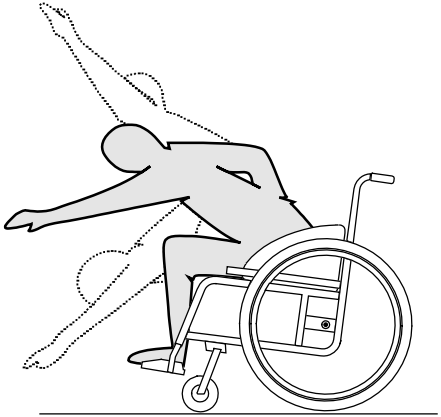
CAUTION!
If you brake for a long time, a lot of frictional heat is produced at the handrims (especially MaxGrepp and Supergripp). You could burn your hands.
- Wear suitable gloves.

6.8 Stability and balance when seated

Some everyday activities and actions require you to lean forwards, sideways or backwards out of the wheelchair. This has a major effect on the wheelchair's stability. To keep your balance at all times, proceed as follows:

Leaning forwards

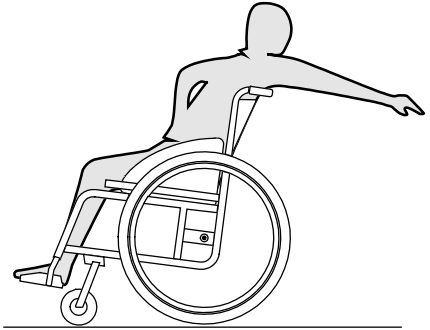
WARNING! Risk of falling out
If you lean forwards out of the wheelchair you could fall out of it. Never bend too far forwards and do not shift forwards in your seat to reach an object. Do not bend forwards between your knees to pick up something off the floor.



- Point the front wheels forwards.
  (To do this, move your wheelchair forwards slightly then back again.)
- Apply both parking brakes.
- When leaning forwards your upper body must remain over the front wheels.

Reaching backwards

WARNING! Risk of falling out
If you lean too far backwards you could tip your wheelchair over.
Do not lean out over the backrest. Use an antitipper device.



- Point the front wheels forwards.
  (To do this, move your wheelchair forwards slightly then back again.)
- Do not apply the parking brakes.
- When reaching backwards do not reach so far that you have to change your sitting position.

7 Transport

7.1 Safety information

WARNING! Risk of injury if wheelchair is not secured during transport
Your wheelchair is not designed for passenger transport in vehicles. You could suffer serious injury in an accident.
- During transport, sit in a correctly secured seat, not in the wheelchair.

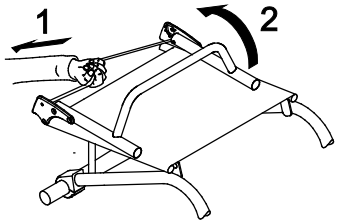
IMPORTANT!
Excessive wear and abrasion could affect the strength of load-bearing parts.
- Do not pull your wheelchair across abrasive surfaces without the wheels fitted (e.g. pulling the frame over tarmac).

7.2 Folding and unfolding the wheelchair

The wheelchair has a rigid frame. Nevertheless, the backrest can be folded forwards and fixed there.

Folding the wheelchair

- Remove the seat cushion, if present.
- Fold the clothes-guard, if present, inwards against the backrest on both sides.
- Pull the cord on the back of the wheelchair and fold the backrest forward until it engages.
- The wheelchair can now be lifted using the backrest brace.



Unfolding the wheelchair

- Pull the cord on the backrest of the wheelchair.

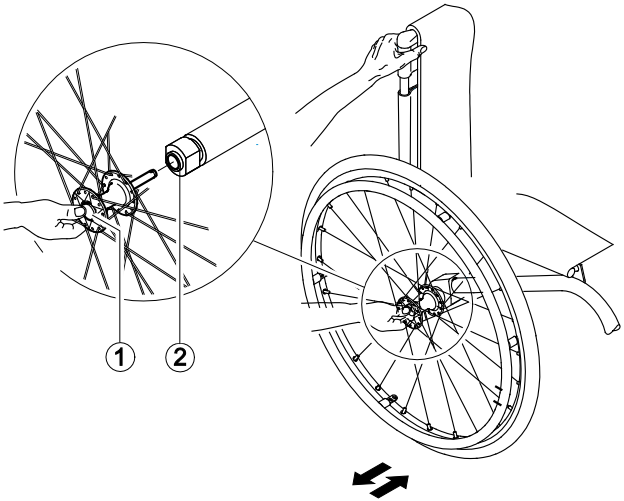
- Pull the backrest backwards using the backrest brace, until the backrest tube engages on both sides of the frame.
- Fold the clothes-guard back into position on both sides.

IMPORTANT!
When unfolding the wheelchair, do not pull the backrest brace without previously releasing the backrest using the cord.

IMPORTANT!
Check that the backrest is completely engaged on the frame, before you use the wheelchair again.

7.3 Removing and fitting the rear wheels

WARNING! Risk of overturning
If the removable axle of a rear wheel is not fully engaged, the wheel can become loose during use. This can lead to overturning.
- Always ensure that the removable axles are fully engaged whenever you fit a wheel.



Removing the rear wheels

- Release the brakes.
- With one hand, hold the wheelchair upright.
- With the other, hold the wheel through the external spoke rim around the wheel hub.
- Using your thumb, press the removable axle button ①. Keep it pressed and pull the wheel out of the adapter sleeve ②.

Fitting the rear wheels

- Release the brakes.
- With one hand, hold the wheelchair upright.
- With the other, hold the wheel through the external spoke rim around the wheel hub.
- Using your thumb, press the removable axle button and hold it down.
- Push the axle into the adapter sleeve ② up to the stop.
- Release the removable axle button and make sure that the wheel is secure.

8 Maintenance

8.1 Maintenance schedule

To ensure safe and reliable operation, carry out the following checks and maintenance regularly or have it carried out by another person.

	Weekly	Monthly	Annually
Check the tyre pressure	✓		
Check that rear wheels are seated correctly	✓		
Checking the adjustment of the backrest joint	✓		
Visual check		✓	
Clean the front wheels		✓	
Check bolts		✓	
Check spokes		✓	
Check parking brakes		✓	
Have wheelchair checked by the specialist dealer			✓

Check the tyre pressure

- Check the tyre pressure (→ Pressure table in Section 3 - *Technical data*).
- Inflate the tyres to the required pressure.
- Check the tyre tread at the same time.
- If necessary, change the tyres

Check that rear wheels are seated correctly

- Pull on the rear wheel to check that the removable axle is seated correctly. The wheel should not come off.
- If the rear wheels are not engaged properly, remove any dirt or deposits. If the problem persists, have the removable axles re-fitted by a specialist dealer.

Checking the adjustment of the backrest joint

- Sit into the wheelchair and lean back on the backrest. The backrest must be correctly engaged.
- Pull the release cord. The pins must be free-moving on both sides. Otherwise, the backrest joint will have to be re-fitted by a specialist dealer.

Visual check

- Examine your wheelchair for loose parts, cracks or other defects.
- If you find anything, have your wheelchair checked immediately by a specialist dealer.

Clean the front wheels

- Check that the front wheels turn freely.
- Remove any dirt or hair from the front wheel bearings.

Check the bolts

Bolts can work loose through constant use.

- Check that the bolts are tight (on the footrest, seat cover, sides, backrest, frame, seat module).
- Tighten any loose bolts.

IMPORTANT!
Safety nuts and bolts lose their effectiveness as a result of repeated loosening and tightening.
- Safety nuts and bolts should be replaced by a specialist dealer.

Check the spoke tension

The spokes should not be loose or distorted.

- Loose spokes should be tightened by a specialist dealer.
- Broken spokes should be replaced by a specialist dealer.

Check the parking brakes

- Check that the parking brakes are positioned correctly.
  The brake is set correctly if the brake shoe depresses the tyre by a few millimetres when the brake is applied.
- If you find that the setting is not correct, have the brakes correctly set by a specialist dealer.

IMPORTANT
The parking brakes must be reset after replacing the rear wheels or changing their position.

Checking after a heavy collision or blow

The wheelchair can sustain visibly undetectable damage as a result of a heavy collision or hard blow.

It is essential to have your wheelchair checked by a specialist dealer after a heavy collision or hard blow.

Repairing or changing an inner tube

- Remove the rear wheel and release any air from the inner tube.
- Lift one tyre wall away from the rim using a bicycle tyre lever. Do not use sharp objects such as a screwdriver which could damage the inner tube.
- Pull the inner tube out of the tyre.
- Repair the inner tube using a bicycle repair kit or, if necessary, replace the tube.
- Inflate the tube slightly until it becomes round.
- Insert the valve into the valve hole on the rim and place the tube inside the tyre (the tube should lie right round the tyre with no creases).
- Lift the tyre wall over the edge of the rim. Start close to the valve and use a bicycle tyre lever. When doing this,

check all the way round to ensure that the inner tube is not trapped between the tyre and the rim.

- Inflate the tyre to the maximum operating pressure. Check that no air is escaping from the tyre.

Spare parts

All spare parts may be obtained from a Küschall specialist dealer.
A current list of spare parts is available on the internet at *www.kueschall.com*.

8.2 Cleaning

Your wheelchair will serve you well for many years if you clean it regularly.

IMPORTANT!
Sand and seawater can damage the bearings and steel parts can rust if the surface is damaged.
Only expose the wheelchair to sand and seawater for short periods and clean it after every trip to the beach.

- Clean the cushions and metal parts with a soft, damp cloth.
- Dry the wheelchair carefully with a cloth after using it in the rain or in the shower.
- If the wheelchair is dirty, wipe off the dirt as soon as possible with a damp cloth and dry it carefully.

IMPORTANT!
Do not use coarse abrasives, aggressive cleaning products or high-pressure cleaners.

8.3 Disinfection

The wheelchair may be disinfected by spraying or wiping with tested, approved disinfectants.

The Robert Koch Institute has a list of currently approved disinfectants at http://www.rki.de.

9 Troubleshooting

Faults may arise as a result of daily use, adjustments or changing demands on the wheelchair. The table below shows how to identify and repair faults.

CAUTION!
Contact your specialist dealer immediately if you notice a fault with your wheelchair, e.g. a significant change in handling.

IMPORTANT!
Some of the actions listed must be carried out by an authorised specialist dealer. These are indicated.
We recommend that *all* adjustments are carried out by a specialist dealer.

9.1 Identifying and repairing faults

Fault	Possible cause	Action
The wheelchair does not travel in a straight line	Incorrect tyre pressure on one rear wheel	Correct tyre pressure (→Section 3 - *Technical* data)
	One or more spokes broken	Replace faulty spoke(s) (→specialist dealer)
	Spokes tightened unevenly	Tighten loose spokes (→specialist dealer)
	Front wheel bearings are dirty or damaged	Clean or replace the bearings (→specialist dealer)
The wheelchair tips backwards too easily	Rear wheels are mounted too far forwards	Mount the rear wheels further back (→specialist dealer)
	Back angle too large	Reduce the backrest angle (→specialist dealer)
	Seat angle too large	Use longer vertical struts (→specialist dealer)
The brakes are gripping poorly or asymmetrically	Incorrect tyre pressure in one or both rear tyres	Correct the tyre pressure (→Section 3 – Technical data)
	Brake setting incorrect	Correct the brake setting (→specialist dealer)
Rolling resistance is very high	Tyre pressure in rear tyres is too low	Correct tyre pressure (→Section 3 - *Technical* data)
	Rear wheels not parallel	Ensure the rear wheels are parallel (→specialist dealer)
The front wheels wobble when moving fast	Too little tension in front wheel bearing block	Tighten the nut on the bearing block axle slightly (→specialist dealer)
	Front wheel has worn smooth	Change front wheel (→specialist dealer)
The front wheel is stiff or stuck	Bearings are dirty or faulty	Clean or replace the bearings (→specialist dealer)

10 After use

10.1 Re-use

The wheelchair is suitable for re-use. The following actions should be taken:

- Cleaning and disinfection according to Section 8 - Cleaning in this manual.
- Inspection according to Chapter 8 - Maintenance schedule in this manual.
- The wheelchair should be adapted for the new user in accordance with the service documentation (available from the Küschall® distributor for your country, →end of this document).

10.2 Disposal

Be environmentally aware and dispose of your wheelchair properly. Disposal is subject to national and local regulations.

For correct disposal, contact your specialist dealer or ask your town or district council about local waste management companies.

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